

Application No. 09/680,122
Amendment "D" dated July 7, 2005
Reply to Office Action mailed June 6, 2005

REMARKS

In the last Office Action claims 1-9, 27, 29-32 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,987,100 to Fortman et al. ("*Fortman*") in view of U.S. Patent No. 6,704,786 to Gupta et al. ("*Gupta*") and U.S. Patent No. 6,577,618 to Diachina et al. ("*Diachina*"); claims 20-24, and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fortman* in view *Gupta*, *Diachina*, and U.S. Patent No. 6,131,118 to *Stupek*, Jr. et al ("*Stupek*"); claims 10-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Fortman* in view *Gupta*, *Diachina*, and U.S. Patent No. 6,070,184 to Blount et al. ("*Blount*").¹

By this paper, claims 1, 7-10, 16-17, 24, 26, 27, and 34 have been amended² and claims 11-13, 15-16, 18, 24 and 26 have been cancelled, such that claims 1-10, 14, 17, 20-23, 27, 29-32, and 34 remain pending, of which claims 1, 7, 8, 9, 27 and 34 are the only independent claims at issue.

The present invention is generally directed to embodiments for efficiently sending notifications to client systems when an event has occurred and in such a way as to preserve the processing capacity of the server system and the client system, as well as the bandwidth on the network system, particularly when corresponding client data is sent to the client system.

The method recited in claim 1, for example, includes the server system determining that a notification is to be sent to the client system upon the occurrence of one of the monitored events. Thereafter, the server system sends notification data to the client using a connectionless protocol.

¹ Although the prior art status of all cited art is not being challenged at this time, Applicants reserve the right to do so in the future. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status or asserted teachings of the cited art.

² Support for the amendments, which is found throughout the specification, primarily includes the disclosure found on pages 19 and 23 of the specification.

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Upon determining that the server has client data to transmit to the client system the server system initiates contact from the client device using a connection-oriented protocol. Finally, the server transmits the client data to the client system using exclusively the connection-oriented protocol and such that it does not first attempt to transmit the client data to the client using the connectionless protocol, which was used to send the notification of the event.

Independent claim 7 is directed to a similar method, only using some functional "step for" language in place of some of the non-functional language used in claim 1. Claims 8 and 9 are directed to corresponding computer program product claims for implementing the methods recited in claims 1 and 7, respectively.

Claims 27 and 28, the last independent claims, are directed to a similar method and corresponding computer program product as those described above, only recited from the perspective of the client rather than the server.

With regard to the rejections of record, Applicants respectfully submit that the pending claims are not made obvious in view of the prior art. To establish a prima facie case of obviousness, "the prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2143 (emphasis added). Further, "[i]n determining the difference between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." MPEP § 2141.02. In light of these requirements, the prior art must illustrate specifically each limitation without improper combinations to show elements that simply do not exist in the cited references. In other words, it is improper to reject the claims as obvious by stating what one of skill in the art might have done without specifically citing where

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such an element is disclosed. Obviousness may not be based on impermissible hindsight, using "knowledge gleaned only from applicant's disclosure." MPEP § 2145(X)(A). During examination, the pending claims are given their broadest reasonable interpretation, i.e., they are interpreted as broadly as their terms reasonably allow, consistent with the specification. MPEP §§ 2111 & 2111.01.

In rejecting each of these independent claims, the Office Action asserts that *Fortman* teaches sending data to a client system using a connection-oriented protocol, but acknowledges that *Fortman* fails to teach sending notification data to a client system using a connectionless protocol. See, e.g., Office Action, p. 4 (rejection of claim 1). To make up for this deficiency, the Office Action cites *Diachina* and *Gupta* as disclosing connectionless and connection-oriented protocols and asserts that it would have been obvious at the time of the invention for one of ordinary skill in the art to use a connectionless protocol when sending a notification to a client. Applicants respectfully disagree for at least the reasons previously presented.

Nevertheless, the claims have been amended to further clarify that the server first determines it has additional data to send to the client prior to initiating contact with the client system over a connection-oriented protocol and that the server then transmits the client data to the client system using exclusively the connection-oriented protocol, and without first attempting to send the client data using the connectionless protocol.

The portions of *Diachina* cited in the Office Action relate to contrasting circuit-switched technology with packet-switched technology in a telecommunication context. Col. 1, ll. 12-21; col. 1, l. 56 – col. 2, l. 20. In particular, *Diachina* notes that circuit-switched technologies are connection-oriented and establish a physical call connection that is maintained for the duration of a data exchange. Packet-switched technologies, which may be either connection-oriented (e.g.,

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X.25) or connectionless (e.g., IP), do not require set-up and tear-down of a physical connection and therefore may be better suited to certain types of transactions. Although *Diachina* may provide guidance with respect to choosing between circuit-switched technologies and packet-switched technologies, the same cannot be said for selecting between connection-oriented and connectionless technologies, since the cited portion of *Diachina* indicates that packet-switched technologies may be either connection-oriented or connectionless, but offers no further guidance for selecting between a connection-oriented packet-switched technology and a connectionless packet-switched technology. Accordingly, it is clear that *Diachina*, like *Fortman*, fails to disclose or suggest a server using connectionless protocols to send clients notifications of events and thereafter, upon determining the server has additional client data to be transmitted to the client system, transmitting the client data using exclusively connection-oriented protocols for client data, and without attempting to send the client data over a connectionless protocol to the client, as claimed.

The portions of *Gupta* cited in the Office Action disclose TCP and UDP as network protocols. Col. 1, ll. 21-31. In the "Summary of the Invention" *Gupta* indicates that a client first attempts to retrieve information using HTTP and UDP in order to eliminate the need for TCP's virtual connection setup and teardown, but if the HTTP-UDP interaction fails or if a response is received indicating that the return information is beyond the size limits for a UDP transaction, the process falls back to an HTTP-TCP request to get the desired information. Col. 2, ll. 6-17. Based on the portions cited in the Office Action, the only guidance *Gupta* offers with respect to selecting a connectionless protocol or a connection-oriented protocol is first to try UDP, and if unsuccessful fall back to TCP.

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Accordingly, *Gupta's* teachings can actually be viewed in direct contrast with the present claims. In particular, the claims of the present application recite a server sending notification data using a connectionless protocol and thereafter sending client data using exclusively the connection-oriented protocol and without first attempting to send the client data using the connectionless protocol. Even more particularly, *Gupta* does not disclose or suggest the selection of the protocol type based on 'determining if the server system has client data to transmit,' as claimed.

The combination of *Gupta* and *Fortman* also fails to arrive at what is recited by the claims. To the contrary, the combination of *Gupta* and *Fortman* arrives at a device that firsts attempts a UDP transaction and then falls back to a TCP transaction. This combination results in cases where both UDP messages and TCP messages are sent for the same data to be transmitted. It should be appreciated that this actually appears to be in direct contrast with the pending claims for at least the reasons recited above. It should also be noted that transmitting client data using exclusively the connection-oriented protocol eliminates a need to transmit the same data using a connectionless protocol first, as disclosed in the prior art.

It should also be noted that claims 27 and 34 also recite similar elements and should therefore be distinguished from the prior art for at least the same reasons as set forth above. In particular, these claims clarify that 'the client system determines whether the server system has additional client data associated with the occurrence of the event' and 'the client system creates a connection using a connection-oriented protocol to receive client data associated with the occurrence of the event when the client system determines that the server system has additional client data associated with the occurrence of the event.' The prior art, alone and in combination, fails to disclose or suggest such a method. Specifically the cited portions of *Fortman* and

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Diachina offer no guidance for selecting between a connection-oriented protocol and a connectionless protocol. The cited portions of *Gupta* merely indicate that UDP should be tried first, and if unsuccessful fall back to TCP. Accordingly, the references, even when combined, simply do not teach what is recited by the claims. In fact, when combined, the references result in a system with added inefficiencies that the claims of the present application avoid.

Because the cited portions of *Diachina* offer no guidance for selecting between a connection-oriented protocol and a connectionless protocol, and because the cited portions of *Gupta* merely indicate that UDP should be tried first, and if unsuccessful fall back to TCP, Applicants respectfully submit that the amended claims are clearly distinguished over the art of record.

Based on at least the foregoing reasons, therefore, Applicants respectfully submit that the cited art, including *Fortman* in view of *Gupta*, *Diachina* and/or *Blount*³ and/or *Stupek*⁴, fails to anticipate or make obvious Applicants' invention, as claimed, for example, in independent claims 1, 7-9, 27 and 34, as well as the corresponding dependent claims.

Although the foregoing remarks have been focused primarily on the independent claims, Applicants note for the record that all of the rejections and assertions of record with respect to the independent and dependent claims are now moot, for at least the foregoing reasons, and therefore need not be addressed individually⁵.

³The Office Action cites *Blount* only to assert that *Blount* discloses a back-off algorithm, and not in with respect to selecting between a connection-oriented and connectionless protocol. See, e.g., Office Action, p. 18 (rejection of claim 10).

⁴The Office Action cites *Stupek* only to assert that *Stupek* discloses using one notification to represent multiple events, and not with respect to selecting between a connection-oriented and a connectionless protocol. See, e.g., Office Action, p. 14 (rejection of claim 24).

⁵It will be appreciated, however, that Applicants do not necessarily acquiesce to any assertions in the Office Action that are not specifically addressed above, and hereby reserve the right to challenge those assertions in the future, including any official notice taken by the Examiner, if necessary or desired.

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In the event that the Examiner finds any remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 8 day of July, 2005.

Respectfully submitted,



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